



Missouri Weekly Influenza Surveillance Report 2014-2015 Influenza Season¹

Week 13: March 29 – April 4, 2015

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri is Local.²
- A season-to-date total of 51,263 laboratory-positive³ influenza cases have been reported in Missouri. Influenza A remains the predominant type reported this season. Influenza B viruses accounted for 87% of reported cases during Week 13. There were no laboratory-confirmed influenza cases reported by the Missouri State Public Health Laboratory (MSPHL) during Week 13.
- The Centers for Disease Control and Prevention (CDC) has antigenically characterized 15 influenza isolates so far this influenza season from Missouri: five A (H3N2) A/TEXAS/50/2012-like, seven A H3N2 viruses antigenically similar to the A/Switzerland/9715293/2013, one B/MASSACHUSETTS/02/2012-like, and two B/BRISBANE/60/2008-like. Influenza A/TEXAS/50/2012-like and B/MASSACHUSETTS/02/2012-like are included in the 2014-2015 influenza vaccine for the Northern Hemisphere. B/Brisbane/60/2008-like is included in the 2014-2015 Northern Hemisphere quadrivalent influenza vaccine. Influenza A/Switzerland/9715293/2013 is related to, but antigenically and genetically distinguishable, from the A/Texas/50/2012 vaccine virus and accounts for 76.8% of viruses from U.S. laboratories from October 1, 2014 – March 28, 2015.
<http://www.cdc.gov/flu/weekly/>
- Influenza-like illness activity is above baseline for the Missouri Outpatient ILI Surveillance Network (ILINet) and is below baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI was 2.45% and 1.4% through ILINet and ESSENCE respectively⁴.
- The highest rate of laboratory-positive influenza cases were among children aged 0-4 years (36 cases per 100,000 population). One influenza-associated pediatric death has been reported in Missouri to date, this influenza season. Deaths involving Pneumonia and Influenza (P&I) reported to the Bureau of Vital Records increased to 103 deaths during Week 12, resulting in a season-to-date total of 2,384 P&I associated deaths in Missouri⁵.
- No outbreaks of influenza or ILI were reported during Week 13 in Missouri. No ILI-associated school closures were reported during Week 13.
- National influenza activity and surveillance information is prepared by the CDC. The information including a weekly report (FLUVIEW) is available online at <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>.

¹The 2014-2015 influenza season in Missouri began CDC Week 40 (Week ending October 4, 2014) through CDC Week 20 (week ending May 23, 2015).

²Local is defined as: Increased ILI in 1 region; ILI activity in other regions is not increased and recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI. OR Two or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased and recent (within the past 3 weeks) lab evidence of influenza in region with the outbreak and virus activity is no greater than sporadic in other regions.

³Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

⁴Influenza-like Illness (ILI) is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza.

⁵The P&I data are available one week later. The P&I data for the CDC Week provided is the most current data available.

Surveillance Data:

Interactive Maps

The county specific influenza data are provided through interactive maps available at <https://emgis.oa.mo.gov/DPS/BriefingMaps/?bookId=da121920b06d42d59da10dc6b2b35400>. Click on the county to view the influenza data specific to that county.

- Reported Laboratory -positive Influenza Cases by Influenza Type by County, CDC Week 13
- Reported Laboratory -positive Influenza Cases by Influenza Type by County, Season-to-Date
- Percentage of Laboratory-positive Influenza Cases Reported to be Influenza Type A

Data Tables and Graphs

Table 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Week 11 - 13 (March 15 – April 4, 2015)

Influenza Type	Week 11	Week 12	Week 13	2014-2015* Season-to-Date
Influenza A	155	166	64	41,642
Influenza B	1,136	1,027	524	8,279
Influenza Unknown Or Untyped	49	28	13	1,342
Total	1,340	1,221	601	51,263

[†]Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv).

Table 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 13 (March 29 – April 4, 2015)

Age Group	Week 13 Cases	Week 13 Rate [‡]	2014-2015* Season-to-Date	2014-2015* Season-to-Date Rate [‡]
00-04	135	36	9,437	2,488
05-14	137	17	14,559	1,853
15-64	262	7	19,995	503
65+	67	8	7,272	823
Total	601	10	51,263	851

[†]Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Table 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 13 (March 29 – April 4, 2015)

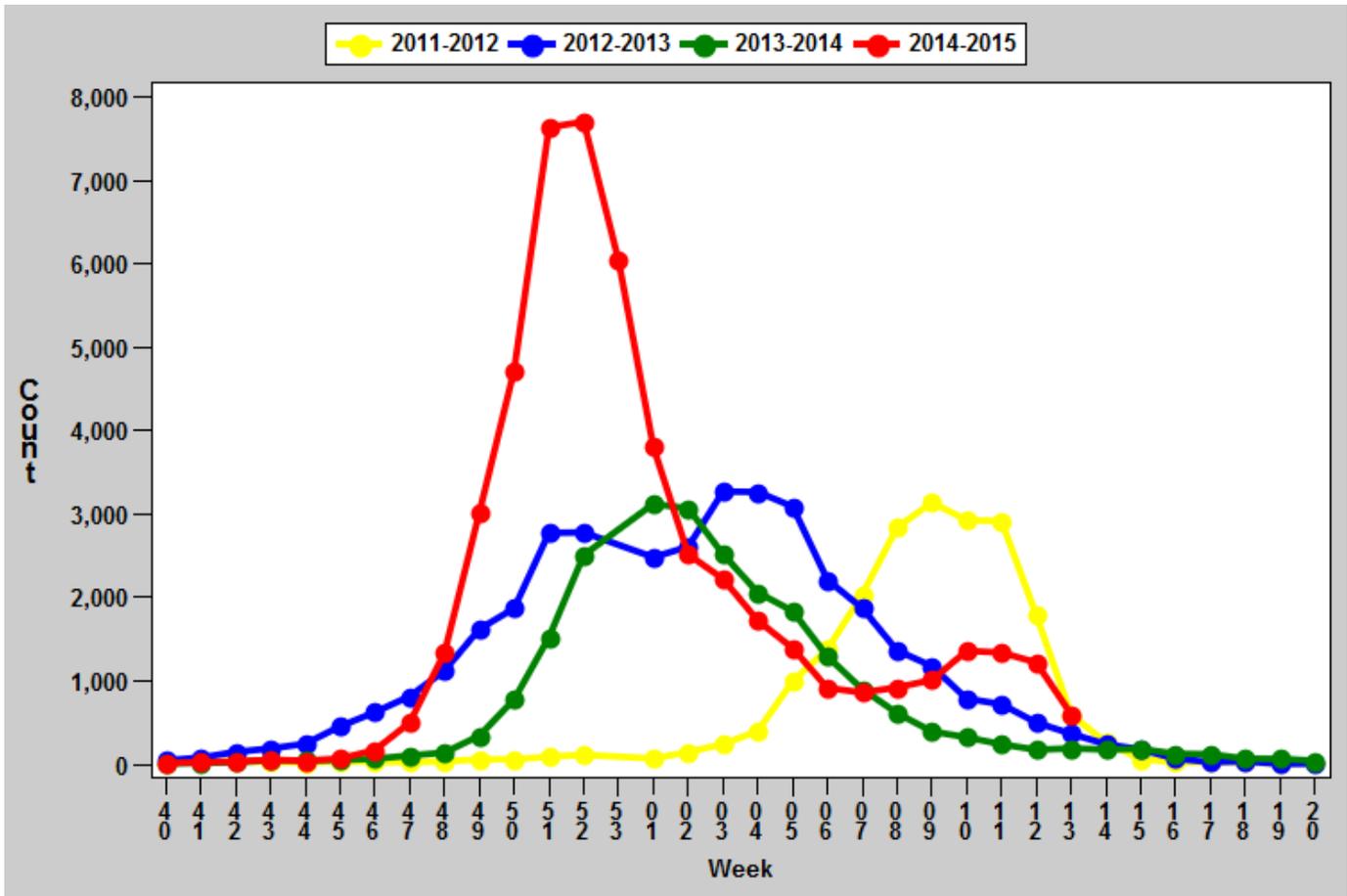
District	Week 13 Cases	Week 13 Rate [‡]	2014-2015* Season-to-Date	2014-2015* Season-to-Date Rate [‡]
CE	57	9	7,082	1,057
EA	280	12	14,360	641
NW	216	14	14,814	938
SE	30	6	5,589	1,177
SW	18	2	9,418	891
Total	601	10	51,263	851

[†] Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡] Incidence Rate per 100,000 population

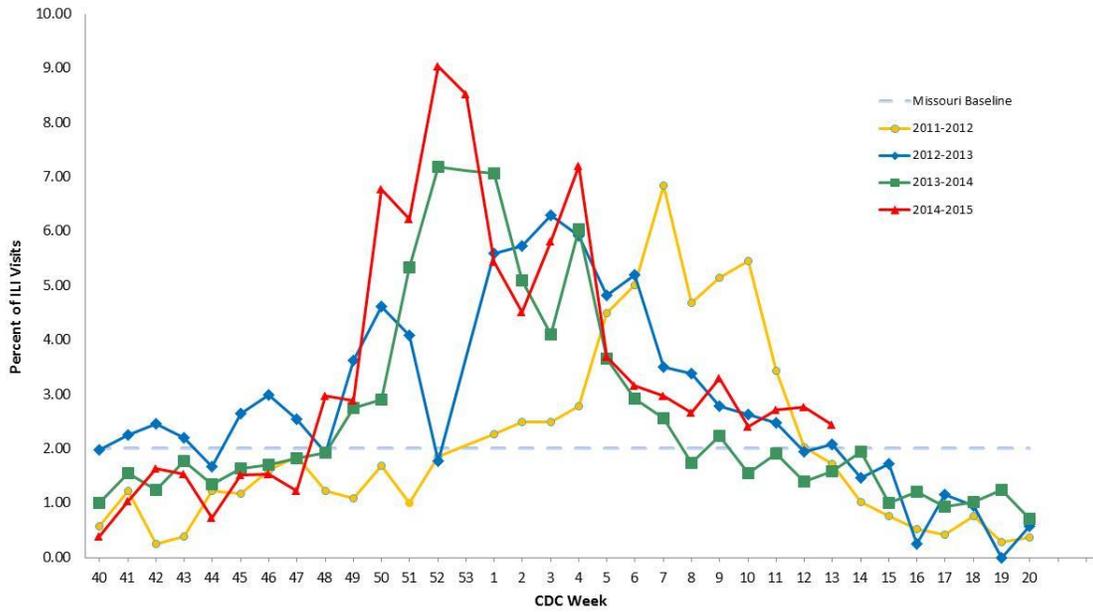
Graph 1. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2011-2015*



[†] Laboratory-positive Influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

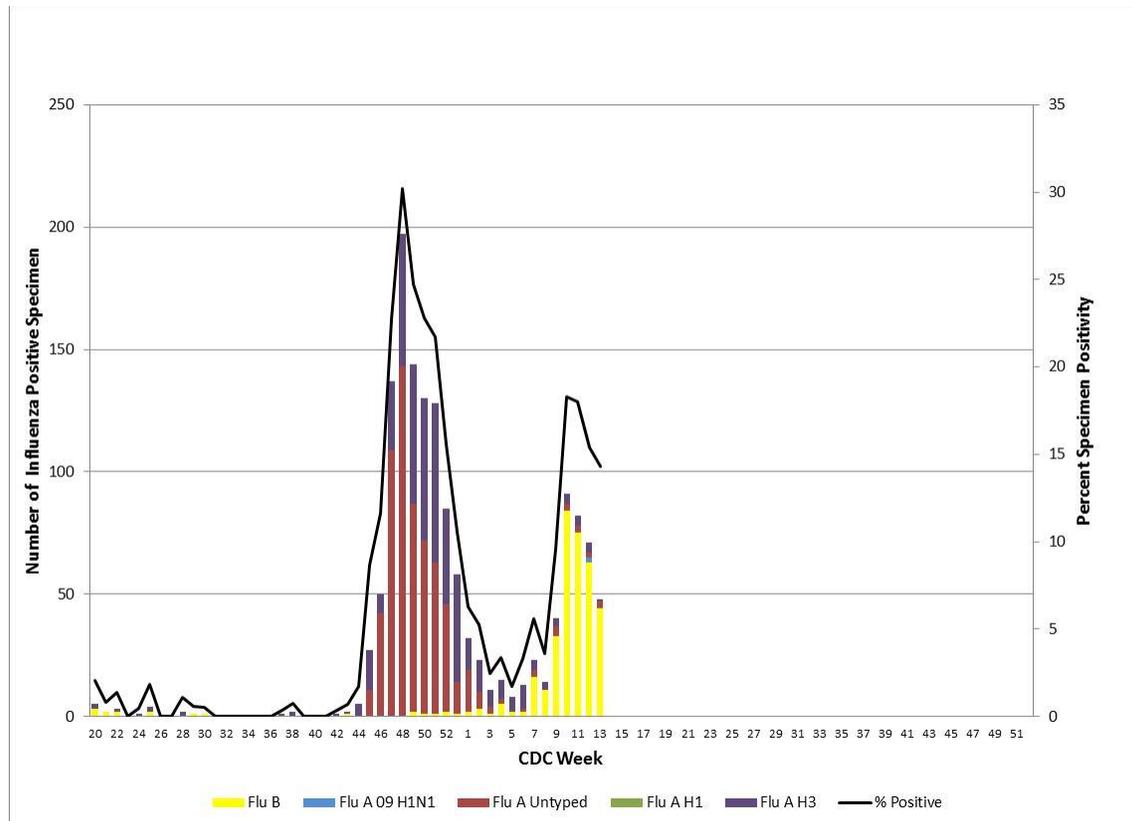
*2014-2015 Season-to-Date through the week ending April 4, 2015 (Week 13). Data Source: Missouri Health Information Surveillance System (WebSurv).

Graph 2. Percentage of Visits for Influenza-like-Illness (ILI), Missouri Outpatient ILI Surveillance Network (ILINet) 2011-2015*



*2014-2015 Season-to-Date through the week ending April 4, 2015 (Week 13)

Graph 3. St. Louis Children's Hospital Season-to-Date PCR (+) and Rapid Influenza Tests

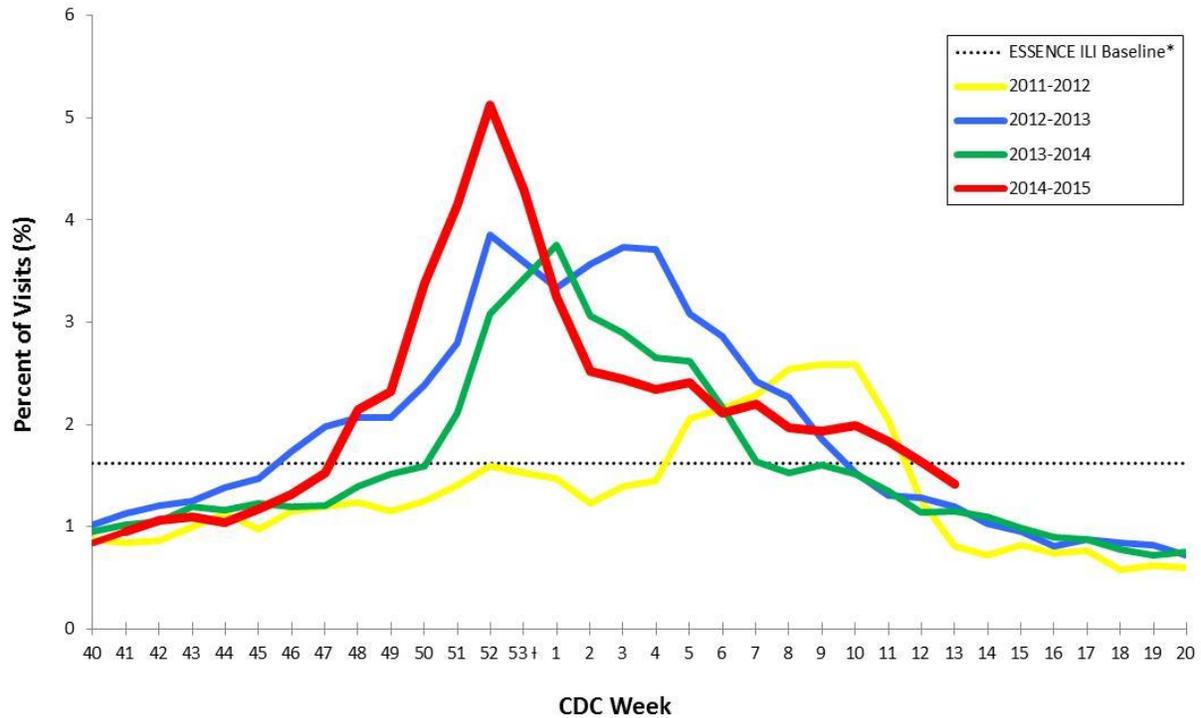


*Data Source: St. Louis Children's Hospitals

*This data is based on testing in all age groups in St Louis metro and SE Missouri

*Influenza Season begins Week Ending October 4, 2014 (CDC Week 40)

Graph 4. Percentage of Emergency Room Visits with Chief Complaint of Influenza-like Illness (ILI), ESSENCE Participating Hospitals in Missouri, 2011-2015[†]



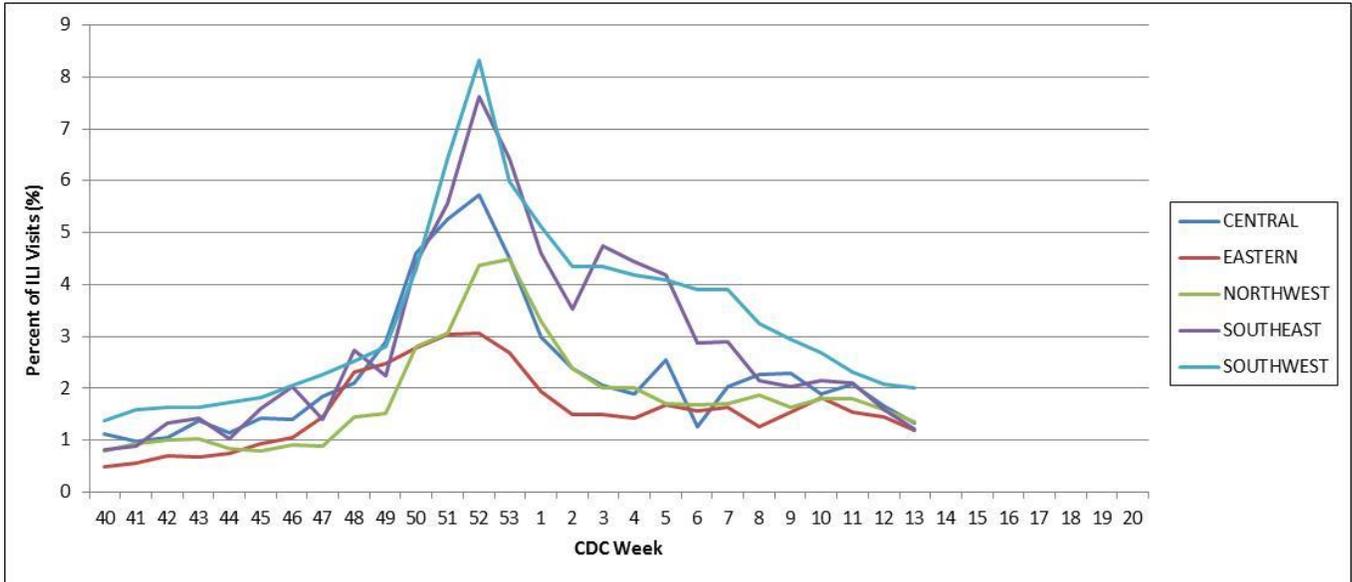
[†] Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. Includes data from 103 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).
 *ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three years (2011-13) when percentage of ILI visits were less than 2% of total visits, plus two standard deviations.

Table 4. Percentage of Emergency Room Visits with Chief Complaint of Influenza-like Illness (ILI) from ESSENCE Participating Hospitals by Age Group, Missouri, CDC Week 13 (March 29 – April 4, 2015)

District	Age 0-4	Age 5-17	Age 18-44	Age 45-64	Age 65+	Total Percentage
Northwest	2.1%	2.1%	1.5%	0.8%	0.7%	1.4%
Central	3.3%	2.1%	1.2%	1.1%	0.6%	1.3%
Eastern	1.9%	1.9%	1.3%	0.7%	0.7%	1.2%
Southeast	3.1%	4.7%	0.9%	0.5%	0.0%	1.2%
Southwest	7.1%	4.3%	1.1%	1.2%	0.7%	2.0%
Statewide	3.1%	2.7%	1.3%	0.9%	0.7%	1.4%

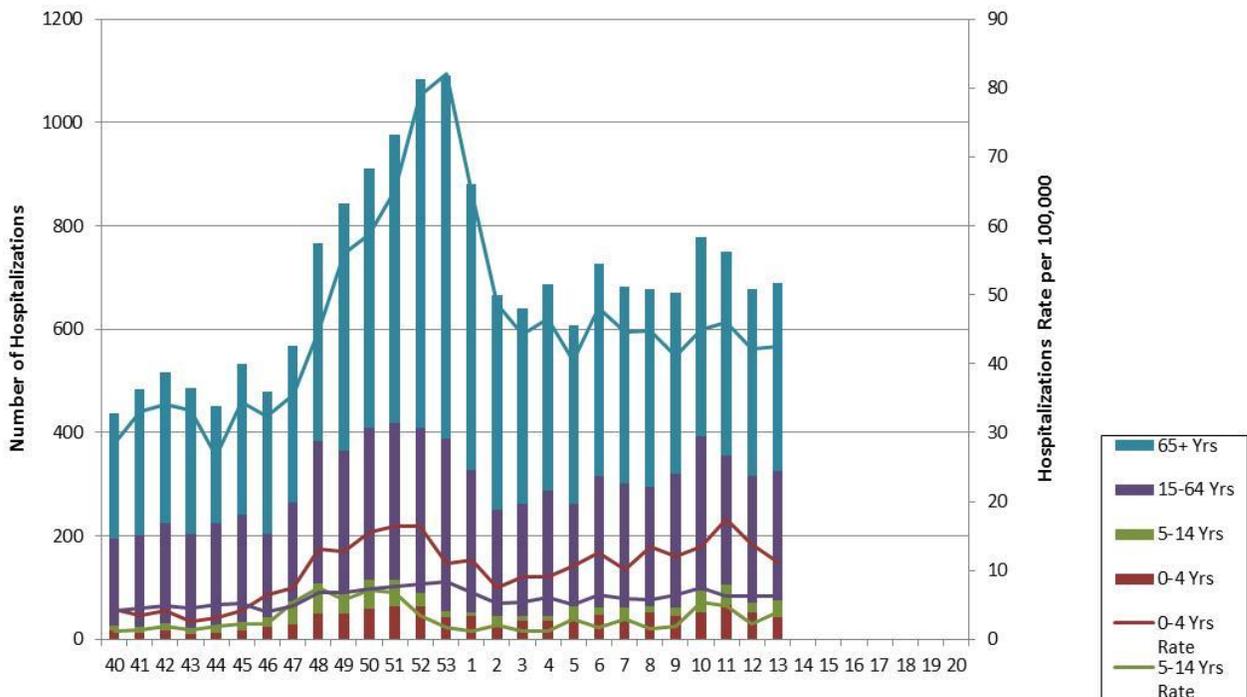
[†] Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. ESSENCE includes data from 103 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moimap.pdf>).

Graph 5. Percentage of Emergency Room Visits with the Chief Complaint of Influenza-like Illness (ILI) for each District by CDC Week, ESSENCE Participating Hospitals in Missouri, 2014-2015*



† Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE. ESSENCE includes data from 103 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moilmap.pdf>).
 *2014-2015 Season-to-Date through the week ending April 4, 2015 (Week 13)

Graph 6. Number and Rate of Patients by Age Group Hospitalized with Influenza and/or Pneumonia Syndromes at Participating Missouri Hospitals, by CDC Week, 2014-2015*



† Data Source: Hospitalization data from Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE HL7 messaging portal. Includes data from 103 reporting facilities in Missouri (<http://health.mo.gov/data/essence/pdf/moilmap.pdf>). Population data from DHSS Population MICA 2012 (<http://health.mo.gov/data/mica/mica/population.php>).
 *2014-2015 Season-to-Date through the week ending April 4, 2015 (Week 13)

Additional Influenza Data Sources:

St Louis Children's Hospital Laboratory: <http://slchlptestguide.bjc.org/Default.aspx?url=7fc7ae5e-0d4b-4ffa-baab-7fa34d1545c3>

Centers for Disease Control and Prevention: National Influenza Surveillance (FLUVIEW)
<http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/